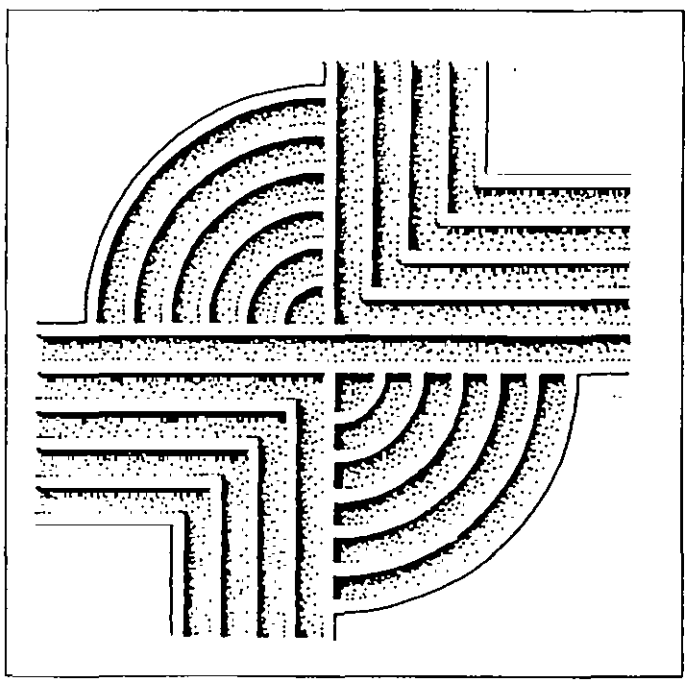
AN INTENSIVE ARCHAEOLOGICAL SURVEY OF A SANTEE COOPER TRANSMISSION LINE, LANCASTER COUNTY, SOUTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 243

AN INTENSIVE ARCHAEOLOGICAL SURVEY OF A SANTEE COOPER TRANSMISSION LINE, LANCASTER COUNTY, SOUTH CAROLINA

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Chicora Foundation Research Series 243

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March 11, 1998

This report is printed on permanent paper ∞

ABSTRACT

This study reports on an intensive archaeological survey of the approximately 1.2 mile long Santee Cooper transmission line in eastern Lancaster County, South Carolina. The line, ranging from 85 to 100 feet in width, runs from the Flat Creek Switching Station northward to U.S. 601. It follows an existing corridor the entire distance.

The corridor had been largely cleared by the time of this survey, providing excellent ground visibility. In addition, the corridor adjacent to the survey was cleared and well maintained, allowing additional, open ground surface. The topography, characteristic of the Sand Hills, was rolling, passing primarily through pine forests and cultivated fields.

The archaeological survey consisted of pedestrian survey of cleared ground areas in the transmission line corridors, coupled with routine shovel testing at 100 foot intervals (and closer interval testing at identified sites).

Prior to this study only one archaeological site (38LA282) was recorded for the study corridor and there were no known National Register sites in the immediate project area. Nor were there any known architectural sites. As a result of the investigations, the one previously identified site was relocated, and two new archaeological sites (38LA418 and 38LA419) were located.

One site (38LA418) is recommended as potentially eligible for inclusion on the National Register. This site represents a large multi-component prehistoric site on a substantial terrace overlooking a small drainage. Although the site has been impacted by previous transmission line construction and maintenance, as well as extensive cultivation and use by local residents, it deserves additional investigation unless it can be avoided by the current project.

38LA419) are recommended as not eligible for inclusion on the National Register. The former is a prehistoric scatter and the latter, while including a light scatter of prehistoric materials, is primarily an early twentieth century structure. Both of these sites lack the data sets and integrity to address significant research questions. For these sites no additional management activities are necessary, pending concurrence by the lead agency and the State Historic Preservation Office.

There is also the possibility that additional resources will be identified during construction. Crews should be made aware that if pottery, arrowheads, concentrations of bricks, or the presence of bones are found in the project area, ground disturbing work should be suspended until the finds can be assessed by either the project archaeologist or the State Historic Preservation Office.

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ACKNOWLEDGMENTS

I want to thank Mr. Ken Smoak of Sabine and Waters for his continuing confidence and support of Chicora Foundation. In addition, Santee Cooper goes out of its way to provide detailed mapping and on-the-ground assistance. They take their cultural resource responsibilities very seriously and that makes our job much easier.

I also appreciate the efforts of the State Historic Preservation Office, especially Dr. Tracy Power, and the S.C. Institute of Archaeology and Anthropology, especially Mr. Keith Derting, to provide me with information on previous surveys and identified resources. Ms. Sharon Pekrul, also of the S.C. Institute of Archaeology and Anthropology consistently works with us to ensure curation of recovered materials and I greatly appreciate her efforts.

Finally, here at Chicora, I want to thank Ms. Debi Hacker for her efforts cataloging and analyzing the recovered materials, as well as Ms. Rachel Campo and Ms. Kerri Barrile for making the numerous trips necessary to gather together the information that one of these seemingly simple reports requires.

INTRODUCTION

Background

This investigation of the proposed 1 mile long transmission line corridor was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Sabine and Waters of Summerville, South Carolina. The project is situated on the eastern edge of Lancaster County in the Sand Hills region of the Upper Coastal Plain of South Carolina (Figure 1).

The corridor ranges from 85 to 100 feet in width and parallels an existing transmission line for its entire length. The project begins just north of the Santee Cooper Flat Creek Switching Station off S-123 and Crookneck Road, running northwesterly on the north side of the existing transmission line for a distance of about 0.7 mile to an unnamed county road. This portion of the corridor crosses two ridge noses and a small drainage, as well as Rev Melvin Adams Road.

At the county road the corridor switches to the west side of the existing line and runs almost due north to U.S. 601, where it joins another transmission line running on the north side of the highway (Figure 2).

Most of the corridor runs through pine, mixed hardwood and pine, or hardwood forests, although a few fields are encountered, especially on the northern end. The proposed corridor, at the time of this study, had been staked and a portion has been bush hogged and/or bulldozed, resulting is excellent surface visibility. In addition, the adjacent corridor is well maintained, especially on the southern end of the project, extending the range of our surface visibility (Figures 3 and 4).

In the mile-long corridor, Santee Cooper proposes to install approximately 15 poles at distances varying depending on topography and other engineering considerations. This will necessitate the clearing and grubbing of the entire corridor, as well as damage from the use of heavy equipment. Continued maintenance of the corridor, while not as dramatic, will have additional impacts. In other words, the proposed transmission line has the potential to seriously damage or destroy any archaeological or historical sites which may exist on the tract — hence the need for the current study.

We were requested by Sabine and Waters to submit a technical and cost proposal for an intensive survey of the tract on February 19. This proposal, submitted that same day, was approved on February 25, 1998.

These investigations incorporated a review of the site files at the South Carolina Institute of Archaeology and Anthropology by Ms. Rachel Campo. One previously recorded site (38LA282) was identified on the transmission line In addition, Dr. Tracy Power at the South Carolina Department of Archives and History was asked on February 27, 1998 to check the master topographic maps at his office to locate any NRHP buildings, districts, structures, sites, or objects in the study area. In addition, his office was asked about the results of any structures surveys which might have been completed in the study area. He reported that there were no National Register properties in the corridor. In addition, there are no known architectural sites on the project tract.

Archival and historical research, given the scope of the project, was limited to the examination of secondary materials in the Chicora Foundation research files.

The survey was conducted on March 3, 1998 by the author. A total of 6.5 person hours were required for this investigation.

The analysis and cataloging of the collections was conducted by Ms. Debi Hacker at Chicora's Columbia laboratories between March 4

Figure 1. Project vicinity in Lancaster County, South Carolina (basemap is USGS South Carolina, 1:500,000).

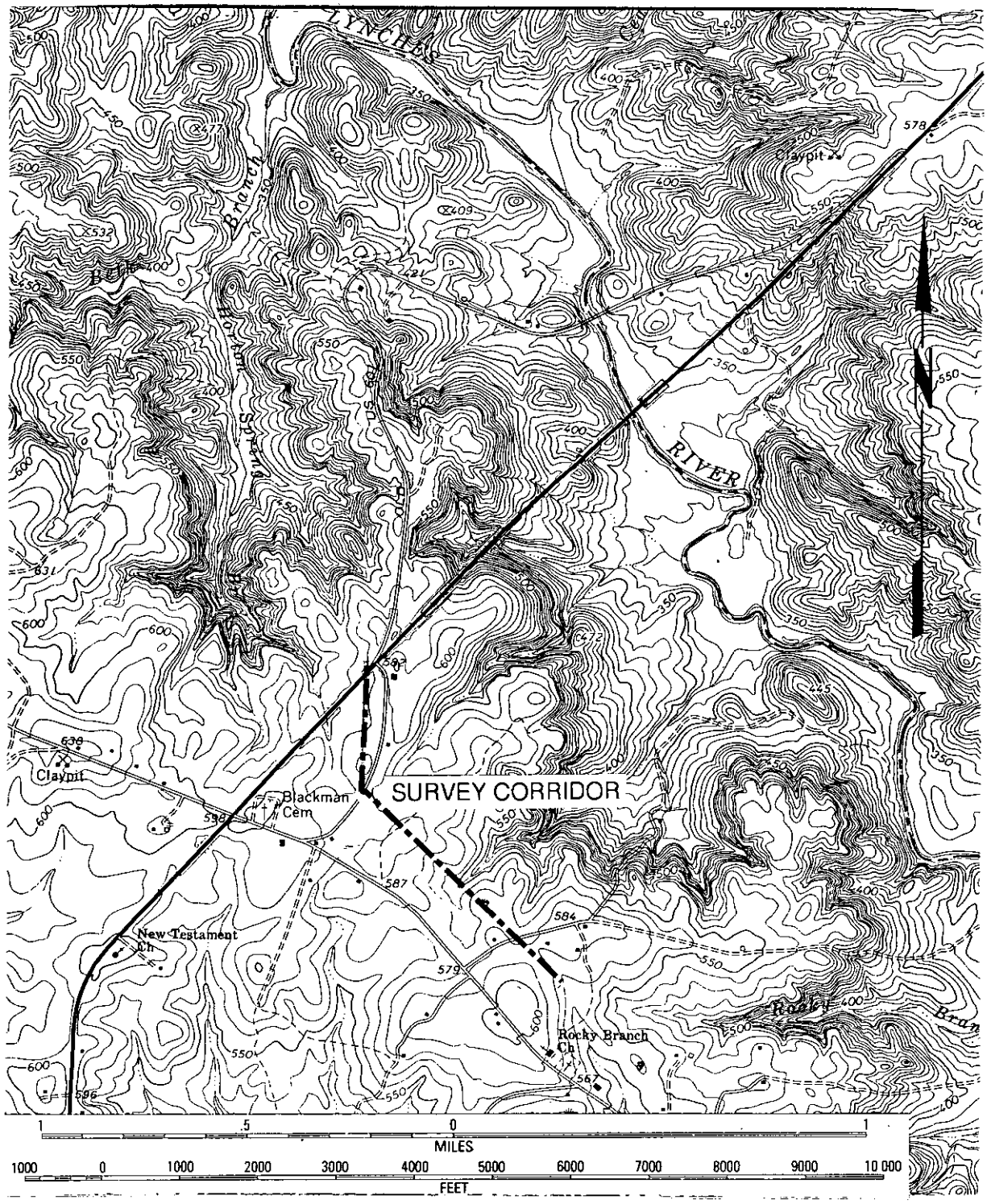

Figure 2. Survey corridor (basemap is the USGS Jefferson 1968 7.5' topographic map).

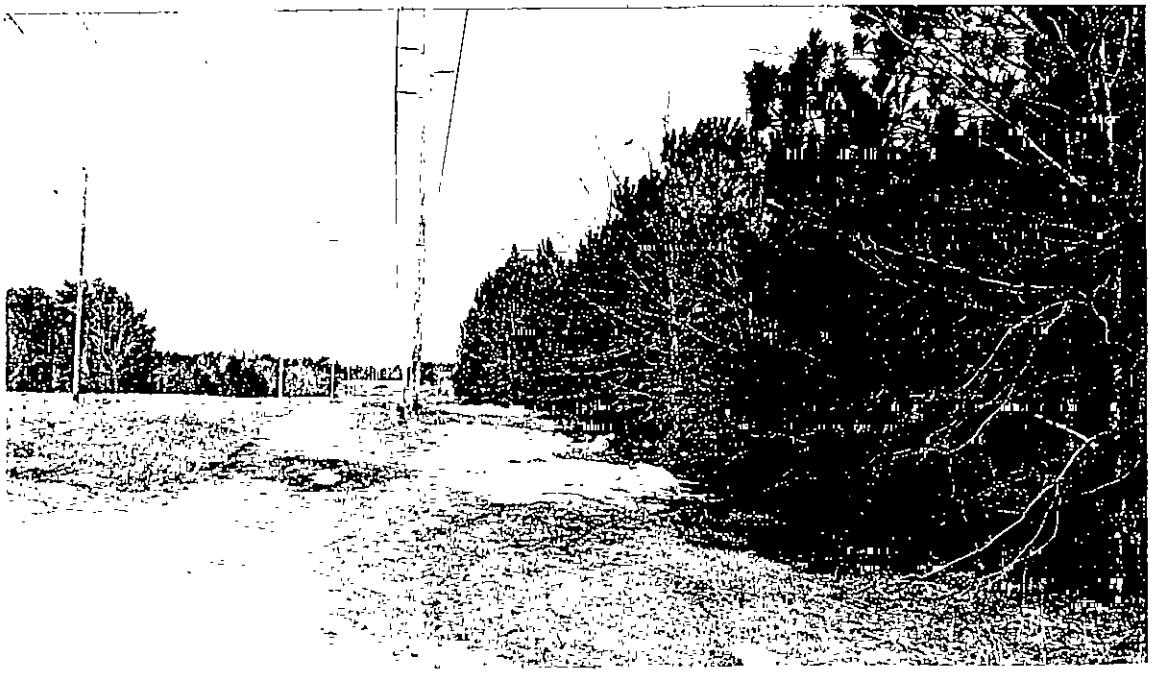

Figure 3. View of the project corridor north of the Flat Creek Switching Station, looking north.

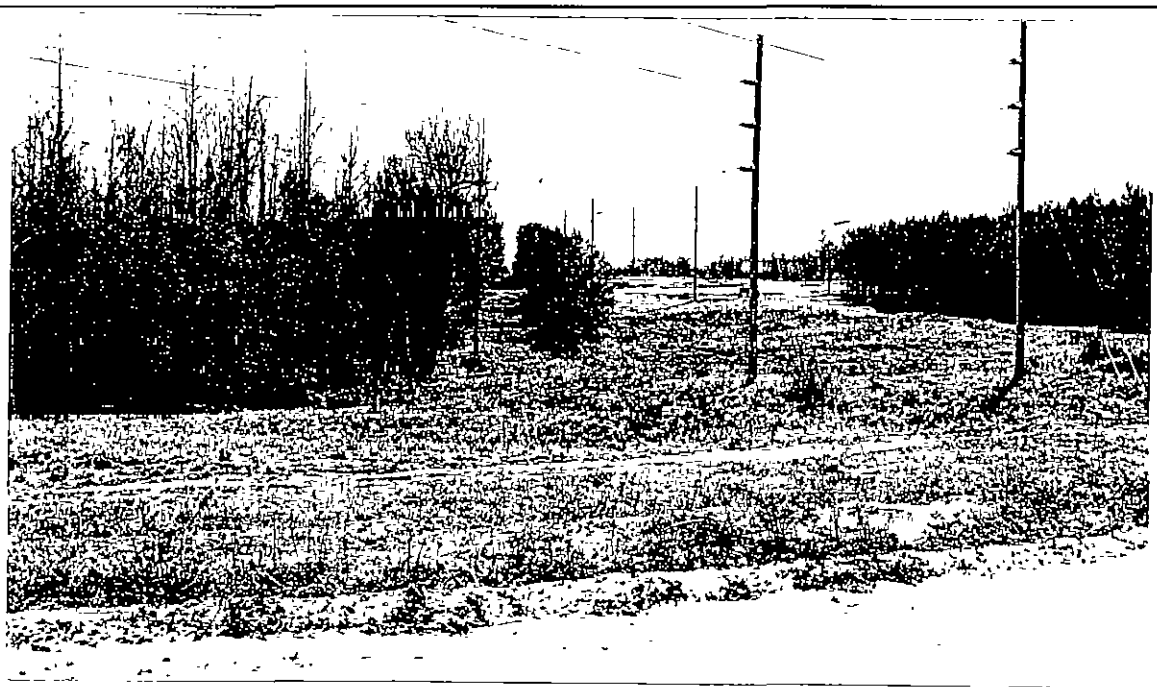

Figure 4. View of the project corridor at the unnamed county road, looking south.

and March 5, 1998. During this work all materials were evaluated for conservation needs. No materials were found which warranted conservation treatments. Additional information concerning curation is available at the end of this section.

Goals and Methods

The primary goals of this study were, first, to identify the archaeological resources of the survey corridor and, second, to assess the ability of those resources to contribute significant archaeological, historical, or anthropological data. The second aspect essentially involves the site's eligibility for inclusion on the National Register of Historic Places, although Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead compliance agency in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

To identify sites within the corridor, a strategy of shovel testing at 100 foot intervals was coupled with pedestrian survey of open ground areas with good surface visibility. For the purpose of this study a site is identified as three or more artifacts within a 25-foot area.

As previously mentioned, the transmission line was well marked and at least a third of its width was already cleared, allowing for excellent surface visibility.

All shovel tests were about 1-foot square and were excavated to subsoil, typically 1.0 to 1.5 feet in depth. All fill was screened through ¼-inch mesh with the tests backfilled immediately afterwards. All materials recovered from shovel testing, except brick and mortar which were noted and discarded in the field, were bagged. Shovel tests were sequentially numbered and recorded on the project maps.

Sites identified either through the shovel testing or through surface collections were subjected to close interval (25 or 50-foot) shovel testing on a cruciform pattern. When sites were identified in plowed fields, the boundaries were based on the extent of the surface scatter. In wooded areas or fallow fields, site boundaries were primarily based on the shovel testing, although even under these conditions we attempted to ensure that the boundaries included any obvious features or surface materials.

Notes were retained on representative shovel tests and photographs were taken of individual sites if warranted in the opinion of the field director. At each site the information necessary for the completion of a South Carolina Institute of Archaeology and Anthropology site form was collected.

Once identified, sites were evaluated for their potential eligibility for inclusion on the National Register of Historic Places. This assessment process follows that outlined by Townsend et al. (1993) in *National Register Bulletin 36*. This evaluative processes involves five steps, forming a clearly defined, explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as artifacts, subsistence remains, architectural remains, or sub-surface features;

- identification of the historic context applicable to the site, providing a framework for the evaluative process;

- identification of the important research questions the site *might* be able to address, given the data sets and the context;

- evaluation of the site's archaeological integrity to ensure that the data sets are sufficiently well preserved to address the research questions; and

- identification of "important" research questions among all of

those which might be asked and answered at the site.

Taking each of these steps individually, the first is simply to determine what is present at the site — for example, are features present, what types of artifacts are present, from what period does the site date? This represents the collection of basic, and essential, information concerning the site and the types of research contributions it can offer. Obviously there is no reason to propose research on eighteenth century plantation development if only early twentieth century ceramics are present. Nor is it perhaps appropriate to explore questions focused on subsistence if no faunal materials are present in the collection. This first step is typically addressed through the survey investigations, often with supporting documentation provided by historic research.

Next, it is important to understand the historic context of the site — what is the history of the project area and of the specific locality? Research questions must be posed with an understanding of this context and the context helps to direct the focus of research. The development of a historic context can be a lengthy process. The historic synopsis in this study provides a preliminary context for a wide range of different site types, although we recognize that it many ways it is superficial and lacking in detail.

Associated with the development of the context is the formation of research questions ***applicable to the site, its context, and its data sets***. Often this research will grow out of previous projects in the area. Certainly topics of exceptional interest continue to be the examination of Middle Woodland ceramics and settlement systems, the spread of eighteenth and nineteenth century plantations into the Upper Coastal Plain, and the development and lifeways of tenancy in the region. Each of these topics is more fully discussed in the following historic overview.

Next it is essential to compare the data sets with the research questions — the information necessary to address the research questions must be present at the site, else posing the question is meaningless in the evaluative process. Focusing on small projects, it may be more appropriate to concentrate on only one or perhaps two research questions and devote the energy necessary to fully explore them, then to propose a range of questions which can be only superficially explored with the data sets or resources available.

Finally, Townsend et al. recognize that not all research questions are of equal importance and that only those of fairly high value should be considered in the evaluation of National Register eligibility. Of all the steps this may be the most difficult to address. Some research questions proposed may seem pedestrian. Our society has viewed history as great events happening to great individuals. Many view architectural significance with the same jaundiced eye — significance being equated with white columns and famous architects. And certainly if the available archaeological studies of low country plantations are examined, there is a similar bias toward big plantations with relatively grand lifeways. Curiously, we know much less about the common planter, the yeoman farmer, or the tenant — and their probably more vernacular architecture — than we do about the famous or the high style. Some historians have referred to the common man as the "invisible person." Others have offered some understanding using the concept of the "marginal man." It is consequently important to understand that significance of archaeological research questions is not judged from the perspective of the wealth, or power, or prestige of the historic persons involved. It is judged from the perspective of what the research can tell us about the past that traditional historical research cannot.

This approach, of course, has been developed for use documenting eligibility of sites actually being nominated to the National Register of Historic Places where the evaluation process must stand alone, with relatively little reference to other documentation where only, typically, one discrete site is being considered. In the case of survey evaluations some modifications of the approach seem reasonable, if not actually essential. Regardless, the approach advocated by Townsend et al. encourages researchers to carefully consider, and justify, their recommendations regarding

National Register eligibility.

Curation

Archaeological site forms have been filed with the South Carolina Institute of Archaeology and Anthropology. The field notes and artifacts resulting from these investigations will be curated with that institution using their proveniencing system which consists of site number-site provenience number- artifact number.

All original records and duplicate copies were provided to the institution on pH neutral, alkaline buffered permanent paper. The artifacts are housed in ziplock bags with pH neutral, alkaline buffered tags. Photographic materials, which consist only of color prints, are not archivally stable and have therefore been retained in Chicora's project files.

NATURAL ENVIRONMENT

Physiographic Province

The project area is situated in the eastern corner of Lancaster County. The southern two-thirds of the corridor runs from ridgetop to ridgetop, crossing several, what appear today to be, minor or intermittent drainages, all flowing eastward into the Lynches River. Along this route the corridor crosses a northwest facing ridge and travels along a substantial southeast facing ridge. The northern third of the corridor runs along the top and western edge of a north-south ridge (Figure 2).

Lancaster County, forming part of South Carolina's north central boundary with North Carolina, is separated from Chesterfield County to the east by Lynches River and from Fairfield, Chester, and York counties to the west by the Catawba River. To the south Lancaster County is bordered by Kershaw County (see Figure 1).

Fishing Creek Pond and Cedar Creek Pond were both mill ponds that by the turn of the century were being used to supply hydroelectric power for the Southern Power Company. In contrast, Lake Wateree was not created until 1919, although it, too, was intended to provide hydroelectric power.

The county is located within two distinct physiographic provinces — the Piedmont Plateau and the Atlantic Coastal Plain. The northern half of the coastal plain is known as the Sand Hills. All but the southeastern corner of the county is found within the Piedmont, separated from the coastal plain by an irregular line, known as the Fall Line, that extends north from the vicinity of Camden in Kershaw County to just west of Kershaw where it loops westward taking in Heath Springs and Pleasant Hill before turning back to the south and running into Kershaw County. There the Fall Line again tends northward, crossing U.S. 601 and extending to Taxhaw in Lancaster County. There it runs south, parallel to the west bank of Lynches River, for about 6 miles before crossing and extending back northward, taking in the town of Jefferson in Chesterfield County.

The project area is technically in the Carolina Sand Hills, an area of discontinuous hilly topography characterized by rounded hills with gentle slopes, moderate relief, and sandy soils. Although technically part of the Coastal Plain geology, the Sand Hills are distinct geographically. Much of the sand was blown into dunes during the Miocene, although weathered clays and very old river deposits are also present. In many cases these sandy deposits lie directly on the crystalline rocks of the Piedmont (Kovacik and Winberry 1987; Murphy 1995).

The project area, therefore, is in close contact with a range of physiographic regions. To the north are the dissected plains consisting of the hills and valleys cut by creeks and rivers as they flow toward the coastal plain. Possibly part of the peneplain, the Piedmont is characterized by the dendritic stream patterns. It is also characterized by a range of metavolcanic, quartz, and quartzite materials used by Native Americans for stone tools. To the south is the Coastal Plain, where the topography changes dramatically, the hilly upper Coastal Plain giving way to the broad expanses of relatively flat, level ground associated with the lower Coastal Plain. These areas provide sources for Coastal Plain cherts, also used extensively for tool manufacture.

In the survey area the elevations range from about 560 to 600 feet above mean sea level (AMSL). The ridge noses have elevations between 580 and 600 feet AMSL, while nearby drainages are about 560 feet AMSL, sloping dramatically to the east, toward Lynches River where, about a mile away, elevations average 350 feet AMSL.

Geology and Soils

Most of the rocks of the Piedmont are gneiss and schist, with some marble and quartzite (Hasselton 1974). Some less intensively metamorphosed rocks, such as slate, occur along the eastern part of the province from southern Virginia into Georgia. This area, called the Slate Belt, is characterized by slightly lower ground with wider river valleys. Consequently, the Slate Belt has been favored for reservoir sites (Johnson 1970), as well as prehistoric occupation (see Coe 1964). In Lancaster County many of the Piedmont soils are weathered from argillites rich in silica and alumina. Other soils are formed in saprolite that weathered from crystalline rocks and "Carolina slates". Soils from the river floodplains formed in sediment that washed from the uplands of the Piedmont province.

The Sand Hills, as previously mentioned, are characterized by a plain that has generally gentle slopes and elevations of 350 to 500 feet. The soils, like those in the Coastal Plain, are typically unconsolidated marine deposits of light colored sands and kaoline clays. These soils are generally well drained, although some soil series do exhibit fragipans (Rogers 1973:7).

The project crosses five different soil series, including Appling and Chesterfield soils, Blanton sands, Rutledge loamy sands, Vaucluse and Blaney loamy sands, and Wagram sands (Rogers 1973:Map 27). While all are typical Sand Hill soils, some series are found on slopes up to 10% (such as the Appling and Chesterfield) and are eroded. In many areas a strong brown (7.5YR5/8) sandy clay is exposed. The 1934 *Reconnaissance Erosion Survey* found that the broad areas of severe sheet erosion with occasional gullies, as well as areas classified as destroyed by gullying, in the project area, largely because of these steeply sloping and poorly managed soils (Lowry 1934).

Blanton sands with slopes up to 15% are also found in the area. These soils, where not eroded, have an Ap horizon of dark grayish-brown (10YR4/2) sand overlying an A21 horizon of light yellowish-brown (10YR6/4) and.

Rutledge loamy sands are very poorly drained and exhibit surface layers of black (10YR2/1) loamy sand. The soils are typically found in depressions and at the heads of small streams and creeks. In the project area they were found associated with the two drainages crossing the transmission line corridor. In one case there was a substantial growth of cattails and other wetland vegetation.

The Vaucluse and Blaney loamy sands have slopes ranging from 2 to 6%. The A horizon has dark grayish-brown (10YR4/2) loamy sand grading into a yellowish-brown (10YR5/4) loamy sand. At about 0.9 foot, there is commonly a fragipan of yellowish-brown (10YR5/6) sandy clay loam. Below this there is yellowish-red (5YR5/6) clay.

The Wagram sands in the corridor are found primarily on side slopes. These slopes range from about 2 to 6%. The typical profile includes an Ap horizon of light olive-brown (2.5Y5/4) and about 0.8 foot in depth overlying an A2 horizon of light yellowish-brown (2.5Y6/4) sand.

Examining the 1971 aerial photographs for the project corridor suggests that at least for the 30 years the land use history has been relatively stable. While there are some open areas being cultivated, primarily at the northern end of the corridor, most of the project area is wooded. By this time there had already been at least one transmission line erected.

Nevertheless, the soil data suggest that the corridor has probably gone through cycles of soil erosion and deposition, with erosion occurring during logging and cultivation, while soils likely built up during periods of forestation. Although classified by Trimble (1974:15) as being part of the Mixed Farming Area with generally low erosive land use, much of the area lost upwards of a foot of soil (Trimble 1974:3).

Furthermore, logging in the Carolina Sand Hills will result in the loss of nearly 0.15 tons of soil per acre per year and mechanical site preparation, perhaps used in the mid-1950s to convert the agricultural fields back to woods, might

have resulted in the loss of over 1 ton of soil per acre per year (U.S. Department of Agriculture 1983:25).

In 1826 Robert Mills provided a very succinct description of the soils, noting that although they varied from "a rich loam to a barren sand," the "lands to the east and south of Cain Creek . . . are mostly stony and gravelly" while to the "north and west of Cain creek, the soil is much more fertile, generally clay and loam" (Mills 1826:596). This division along Cain Creek, between the fertile bottomland soils and the less fertile upland Piedmont and Sand Hills soils, is the exact same division between Trimble's Cotton Plantation Area (with high antebellum erosive land use and a postbellum continuation) and the General Farming Area (with its lower rate of erosion).

For many of the neighboring districts Mills expressed his concern over the treatment lands received. Less than 20 years later Edmund Ruffin had a similar opinion of the sand hills and the wasteful cultivation of the land, yet it seems to have had little impact on the planters he met. He observed that:

> The lands through Richland, of middling quality, or rather below. Surface moderately undulating, & sandy mostly. Oak growth more in proportion to the pine than lower. No very good culture or land seen by me (Mathew 1992:261).

In spite of these early warnings, the South Carolina Department of Agriculture, Commerce, and Immigration, as late as 1907, found no reason to remark on the threat of erosion, noting only that "elevated flats can be brought to a high state of fertility by proper methods of farming" and that the soils are "superior for peanuts, sweet potatoes, sorghum, watermelons and the staples, oats, cotton, corn, and some wheat" (Watson 1907:255). Lancaster County boasted of only one cotton seed oil mill — about on par with the single mills operating in surrounding Chester, Chesterfield, Fairfield, Kershaw, and Sumter counties (Watson 1907:269, 288).

Climate

Elevation, latitude, and distance from the coast work together to affect the climate of South Carolina, including the Sand Hills. In addition, the more westerly mountains block or moderate many of the cold air masses that flow across the state from west to east. Even the very cold air masses which cross the mountains are warmed somewhat by compression before they descend on the Piedmont and adjacent Sand Hills.

Consequently, the climate of Lancaster County is temperate. The winters are relatively mild and the summers warm and humid. Rainfall in the amount of about 46 inches is adequate, although less than in some neighboring counties. About 22 inches of rain occur during the growing season, with periods of drought not uncommon during the summer months. As Hilliard illustrates, these droughts tended to be localized and tended to occur several years in a row, increasing the hardship on those attempting to recover from the previous year's crop failure (Hilliard 1984:16). Perhaps the best wide-scale example of this was the drought of 1845, which caused a series of very serious grain and food shortages throughout the state. Rogers (1974:124) mentions two droughts in the Lancaster area during the first half of the twentieth century.

The average growing season is about 225 days, although early freezes in the fall and late frosts in the spring can reduce this period by as much as 30 or more days (Rogers 1974:125). Consequently, most cotton planting, for example, did not take place until early May, avoiding the possibility that a late frost would damage the young seedlings.

Floristics

Piedmont forests generally belong to the Oak-Hickory Formation as established by Braun (1950), while she classifies the Sand Hills as part of the Southeast Evergreen Forest Region. Regardless, the potential natural vegetation of the project area is the Oak-Hickory-Pine forest, composed of medium tall to tall forests of broadlead deciduous and needleleaf evergreen

trees (Küchler 1964). The major components of this ecosystem include hickory, shortleaf pine, loblolly pine, white oak, and post oak.

Although John Berry rightly comments that "a walk through the most xeric stages of the fall line sandhills would probably be very boring" dominated by turkey oaks, scrubby post oaks, and broad expanses of open sandy soil, there are other econiches. For example, on the more mesic soils pines and mixed hardwoods can be common, dominated by loblolly pines, cedars, southern red oaks, and even pignut and mockernut hickories. In these mesic woods the understory includes dogwoods, sassafras, blackgum, and persimmon (Berry 1980: 103, 114-115). In fact, this is what is seen today in the project area.

The corridor also exhibits considerable ecological diversity. There are several intermittent creeks associated with such trees as pond pine, red maple, and sweet bay. There are shrub layers that are very attractive to a diverse range of mammals, including deer, opossum, and raccoon.

It is this diversity which probably made the project area attractive to Native Americans, who saw the site area as providing a range of different environmental zones in close proximity, not a "boring" or sterile sand wasteland (which admittedly is more typical of some sand hill areas).

PREHISTORIC AND HISTORIC SYNOPSIS

Prehistoric Overview

Overviews for South Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffre Coe's *Formative Cultures* (Coe 1964), as well as some new general overviews (such as Sassaman et al. 1990 and Goodyear and Hanson 1989). Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic and by Anderson et al. (1992) for the Paleoindian and Early Archaic. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study areas. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States: Paleoindian to World War I.* Figure 5 offers a generalized view of South Carolina's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[1] Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is somewhat dated, but has been summarized by Charles and Michie 1992). They reveal a widespread distribution across the state (see also Anderson 1992b:Figure 5.1) with at least several concentrations relating to intensity of collector activity. What is clear is that points are found fairly far removed from the origin of the raw material. Charles and Miche suggest that this may "imply a geographically extensive settlement system" (Charles and Michie 1992:247).

Although data are sparse, one of the more attractive theories that explains the widespread distribution of Paleoindian sites is the model tracking the replacement of a high technology forager (or HTF) adaptation by a "progressively more generalized band/microband foraging

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[1] While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

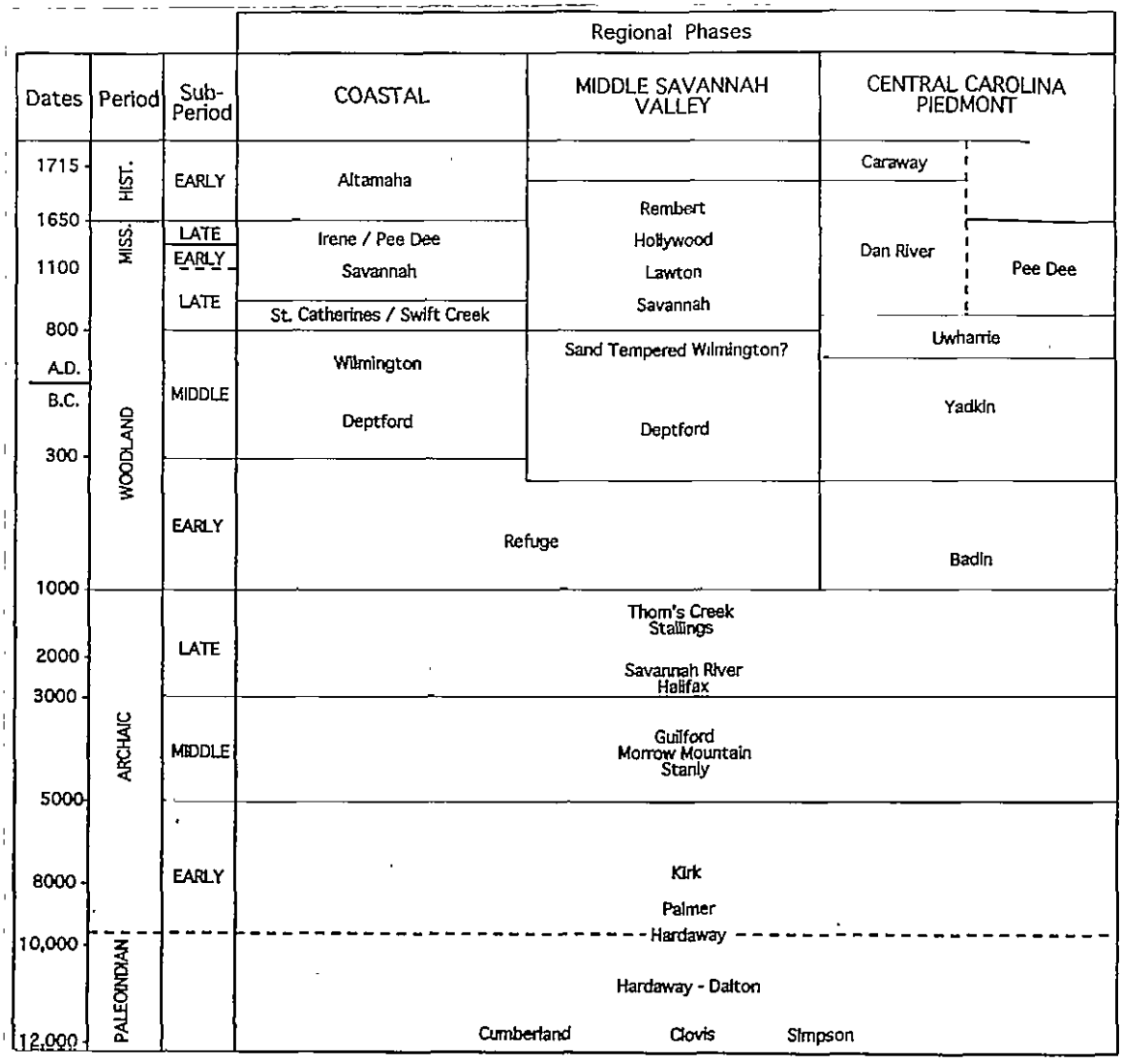

Figure 5. A generalized cultural sequence for South Carolina (partially adapted from Coe 1964:Figure 116).

adaption" accompanied by increasingly distinct regional traditions (perhaps reflecting movement either along or perhaps even between river drainages) (Anderson 1992b:46).

Distinctive projectile points include lanceolates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps (1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[2], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Many researchers have reported data suggestive of a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few very large, and

[2] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period. The importance of the issue in the Sandhills, unfortunately, is not well known.

apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly and Halifax projectile points. Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

Among the most common of all Middle Woodland artifacts is the Morrow Mountain Stemmed projectile point. Originally divided into two varieties by Coe (1964:37,43) based primarily on the size of the blade and the stem. Morrow Mountain I points had relatively small triangular blades with short, pointed stems. Morrow Mountain II points had longer, narrower blades with long, tapered stems. Coe suggested a temporal sequence from Morrow Mountain I to Morrow Mountain II. While this has been rejected by some archaeologists, who suggest that the differences are entirely related to the life-stage of the point, the debate is far from settled and Coe has considerable support for his scenario.

The Morrow Mountain point is also important in our discussions since it represents a departure from the Carolina Stemmed Tradition. Coe has suggested that the groups responsible for the Middle Archaic Morrow Mountain (and the later Guilford points) were intrusive ("without any background" in Coe's words) into the North Carolina Piedmont, from the west, and were contemporaneous with the groups producing Stanly points (Coe 1964:122-123; see also Phelps 1983:23). Phelps, building on Coe, refers to the Morrow Mountain and Guilford as the "Western Intrusive horizon." Sassaman (1995) has recently proposed a scenario for the Morrow Mountain groups which would support this west-to-east time-transgressive process. Abbott and his colleagues, perhaps unaware of Sassaman's data, dismiss the concept, commenting that the shear distribution and number of these points "makes this position wholly untenable" (Abbott et al. 1995:9).

The controversy surrounding Morrow Mountain also includes its posited date range. Coe (1964:123) did not expect the Morrow Mountain to predate 6500 B.P., yet more recent research in Tennessee reveals a date range of about 7500 to 6500 B.P. Sassaman and Anderson (1994:24) observe that the South Carolina dates have never matched the antiquity of their more western counterparts and suggest continuation to perhaps as late as 5500 B.P. In fact they suggest that even later dates are possible since it can often be difficult to separate Morrow Mountain and Guilford points.

A recently defined point is the MALA. The term is an acronym standing for Middle Archaic and Late Archaic, the strata in which these points were first encountered at the Pen Point site (38BR383) in Barnwell County, South Carolina (Sassaman 1985). These stemmed and notched lanceolate points were originally found in a context suggesting a single-episode event with variation not based on temporal variation. The original discussion was explicitly worded to avoid application of a typology, although as Sassaman

and Anderson (1994:27) note, the "type" has spread into more common usage. There are possible connections with both the Halifax points of North Carolina and the Benton points of the middle Tennessee River valley, while the "heartland" for the MALA appears confined to the lower middle Coastal Plain of South Carolina.

The available information has resulted in a variety of competing settlement models. Some argue for increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward argues that the most appropriate model is one which includes relatively stable and sedentary hunters and gatherers "primarily adapted to the varied and rich resource base offered by the major alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations which focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

> the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982). Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages. Curiously, the later Guilford phase sites are not as widely distributed, perhaps suggesting that only certain micro-environments were used (cf. Ward [1983:68-69] who would likely reject the notion that substantially different environmental zones are, in fact, represented).

Recently Abbott et al. argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

From excavations at a Sandhills site in Chesterfield County, South Carolina, Gunn and his colleague (Gunn and Wilson 1993) offer an alternative model for Middle Archaic settlement. He accepts that the uplands were desiccated from global warming, but rather than limiting occupation, this environmental change made the area more attractive for residential base camps. Gunn and Wilson suggest that the open, or fringe, habitat of the upland margins would have been attractive to a wide variety of plant and animal species.

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups with, the bulk of our data for this period coming from the Uwharrie region in North Carolina.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157), developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in the uplands of South or North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Sandhills of South Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings and Thoms Creek series. These sand tempered Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976). Also potentially included are Refuge wares, also characterized by sandy paste, but often having only a plain or dentate-stamped surface (Waring 1968). Others would have the Woodland beginning about 3,000 B.P. and perhaps as late as 2,500 B.P. with the introduction of pottery which is cord-marked or fabric-impressed and suggestive of influences from northern cultures.

There remains, in South Carolina, considerable ambiguity regarding the pottery series found in the Sandhills and their association with coastal plain and piedmont types. The earliest pottery found at many sites may be called either Deptford or Yadkin, depending on the research or their inclination at any given moment.

The Deptford phase, which dates from 3050 to 1350 B.P., is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement pattern involves both coastal and inland sites.

Inland sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Inner Coastal Plain/Sand Hills, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1980). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1990:96-98; see also Sassaman 1993 for similar data recovered from 38AK157).

Further to the north and west, in the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.[3] This pottery is identified as having very fine sand in the paste with an occasional pebble. Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little is known about the makers of the Badin wares and relatively few of these sherds are reported from South Carolina sites.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,300 B.P. to 1,200 B.P. In the Piedmont and even into the Sand Hills, the dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31An19) explored by Peter Cooper (Ward 1983:72-73), have never been published.

Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least 1650 B.P. coexisted with this Triangular Tradition. The Yadkin in South Carolina has been best explored by research at 38SU83 in Sumter County (Blanton et al. 1986) and at 38FL249 in Florence County (Trinkley et al. 1993)

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

[3] The ceramics suggest clear regional differences during the Woodland which seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there "marked distinctions" between the pottery from the Buggs Island and Gaston Reservoirs and that from the south-central Piedmont.

Historic Overview

Like many South Carolina counties, Lancaster lacks anything that might be called a thorough history. Most of the available document focus on genealogical research associated with various families or cemeteries and the *Historic Site Survey, Lancaster County* prepared by the Catawba Regional Planning Council in 1976 offers only a brief introduction to the history of the region.

Mills (1826:595) notes that the earliest settlement in Lancaster was by immigrants from Pennsylvania and Virginia about 1745 at a place called Waxhaws, near the Catawba settlements. While sheltered by the Catawba, settlement to the west, toward the Cherokee lands was slow and the area was not intensively settled until after 1761 — after the series of three "wars" waged by South Carolina on the Cherokee (see Hatley 1993). Although the area was largely claimed by the Catawba, this created little concern and Mills noted that the Waxhaw settlers became "rid of their powerful and dangerous neighbors" through a smallpox epidemic about 1750 (Mills 1866:595).

Mouzon's 1755 *An Accurate Map of North and South Carolina* (Figure 6) shows that settlements are closely associated with what was at that time called the East Branch of Lynches Creek. Although little research has been conducted, it seems likely that the nearby Miller and Mires settlements would have been on the uplands overlooking broad alluvial floodplains suitable for cultivation. It is unlikely that any of these settlements were in the project area.

Like much of the upcountry, the American Revolution was characterized a bloody series of

partisan skirmishes in Lancaster. On May 29, 1780 the Battle of the Waxhaws, also known as Buford's Massacre, occurred near the City of Lancaster. A regiment of Virginians, under Colonel Abraham Buford, had been on their way to reinforce patriot forces at Charleston when they heard that the city had fallen and turned back. They were intercepted by Colonel Banastre Tarleton, whose troops slaughtered the Americans as they attempted to surrender. This exceptional cruelty ended the passiveness of many backcountry settlers and began an aggressive backcountry campaign on both sides. Additional battles were fought at Hanging Rock (on July 30, 1780 and August 6, 1780) where the Americans successfully captured British supplies and at Waxhaw Church (on April 10, 1781).

After the Revolution, settlement in the area grew slowly, primarily as small communities were established along both overland trails and along the navigable rivers. Originally part of the Camden District, Lancaster was created in 1785, encompassing what are today Lancaster and Kershaw counties. Kershaw was split off only six years later, in 1791.

By the 1820s Lancaster's main town, Lancasterville, boasted 30 buildings and about 260 residents. Among the more impressive buildings were the court house, a jail (both built in 1823), and what Mills described as a "handsome brick academy" (Mills 1826:597). County-wide there were 5848 whites and 4473 African American slaves in 1820 — clear evidence of the importance of cotton, especially along the Catawba River. Cotton, of course, was greatly promoted in the South Carolina piedmont by the invention of the cotton gin in 1790.

Mills' *Lancaster District* shows that the Miller family continued to hold land on the Lynches River (Figure 7). While settlements are still strongly associated with the navigable waterways, there appear to be more farms along the various roads connecting major towns such as Lancaster and Camden. Still, there are no settlements shown for the project area.

While the history focuses on cotton, there was another side of equal interest:

> Lancaster's history has been tinged with many religious vagaries, including legal recognition of witchcraft, and the Waxhaw Revival. Early in the nineteenth century a poor girl of Lancaster testified that Barbara Powers had converted her into a horse and had ridden her so incessantly that her health had suffered. The case was thrown out of court. At about the same time the Waxhaw Revival, offshoot of the Nationwide Great Revival, threw many of the county's staid Presbyterians into trances and ecstatic shouting (Writers' Program, Work Projects Administration 1941:310).

By 1850 the white population had held steady at 5,857 while the African American slave population had increased to 5,014 (DeBow 1854:302). It ranked 18th in cotton production, with 8,661 bales. This was far less than produced by neighboring York, Chester, Fairfield, or even Kershaw, but surpassed the production of Chesterfield County to the east, again documenting Lancaster's division between profitable upland cotton farms and the subsistence farms of the sand region. When the agricultural statistics are examined, Lancaster proves to be a leader in none of the various categories.

The 1865 Coast Survey Map of North and South Carolina primarily reveals the increase in mills and gold mines — reflecting the Carolina gold boom of the early to mid-nineteenth century (Figure 8).

Lancaster was largely quiet during the Civil War until Sherman's troops cut across the county just south of the project area on March 1, 1865 (*Atlas to Accompany the Official Records of the Union and Confederate Armies*, Plate 70, numbers 5 and 6). This undoubtedly caused considerable terror in the local community, as well as considerable loss of property.

In the aftermath of the Civil War,

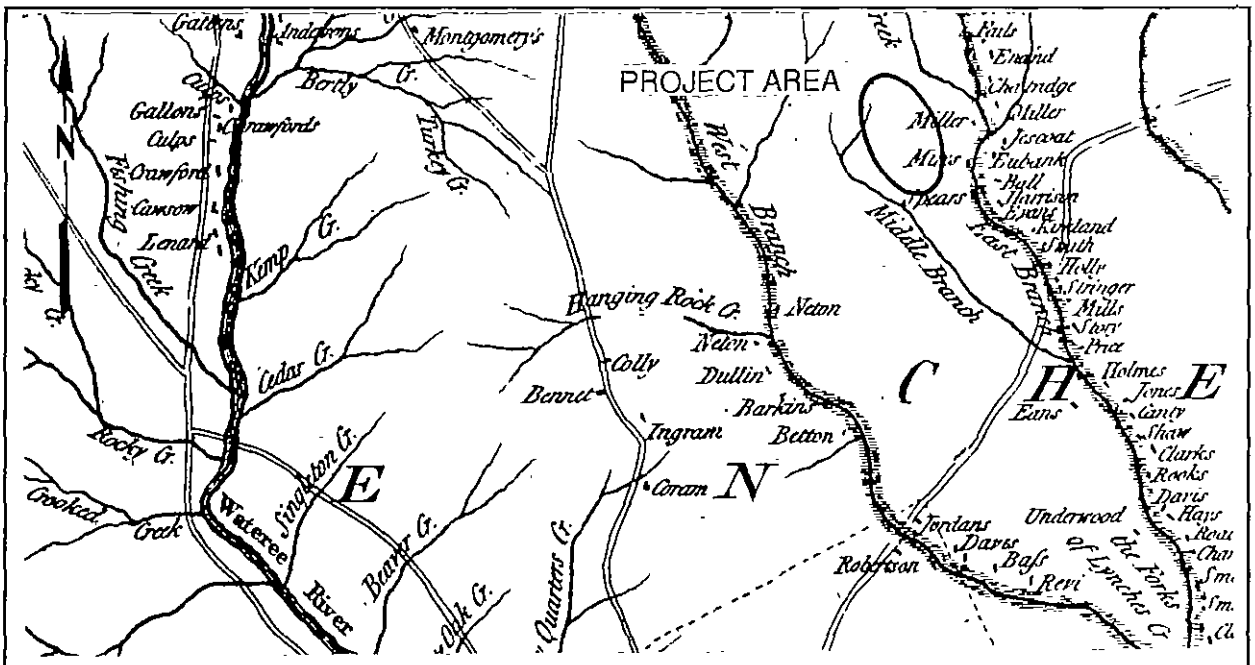

Figure 6. A portion of Mouzon's 1775 *An Accurate Map of North and South Carolina* showing the project area.

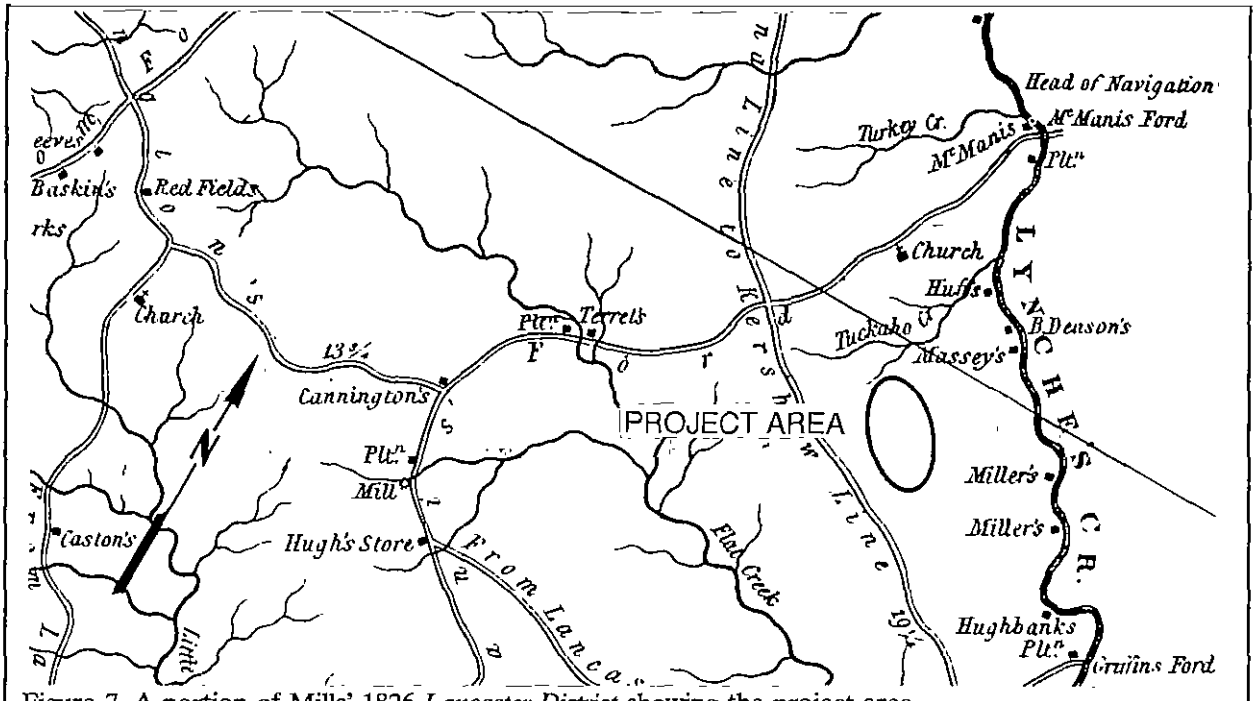

Figure 7. A portion of Mills' 1826 *Lancaster District* showing the project area.

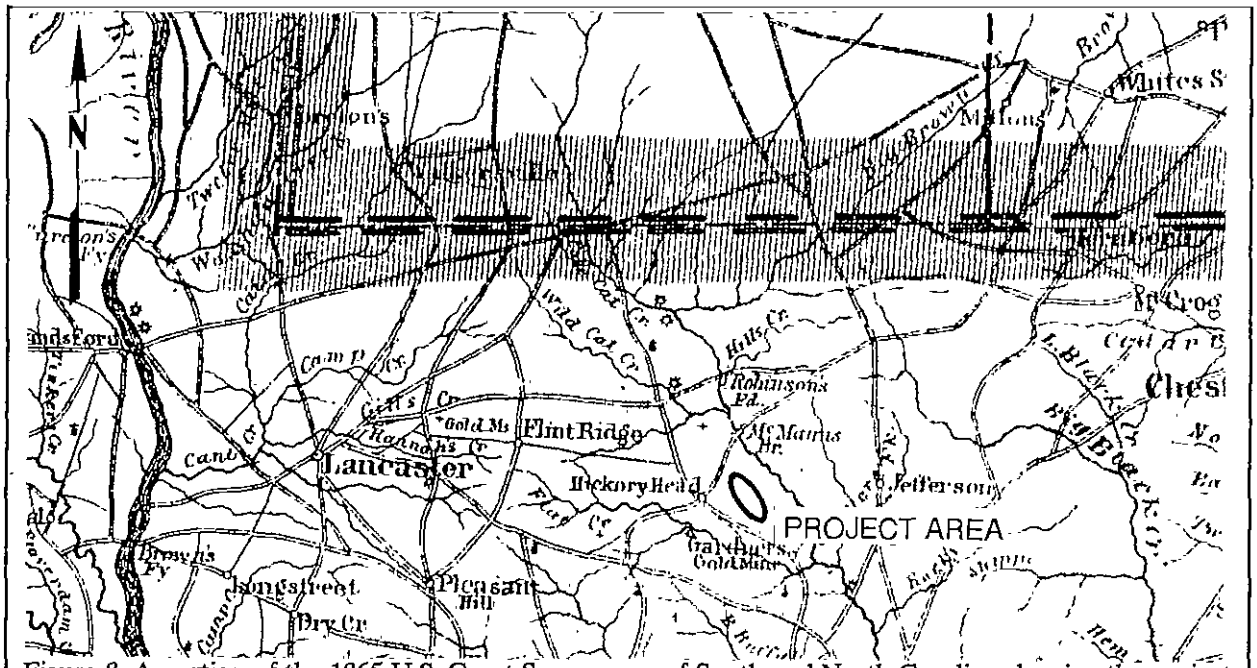

Figure 8. A portion of the 1865 U.S. Coast Survey map of South and North Carolina showing the project area.

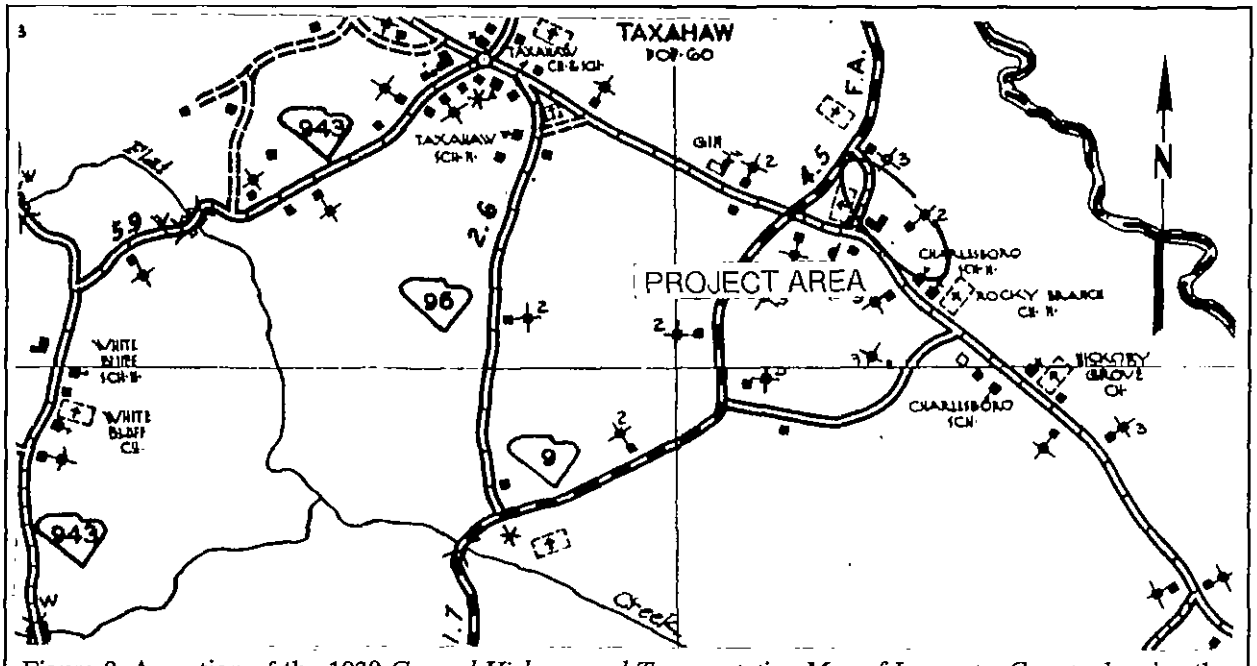

Figure 9. A portion of the 1939 *General Highway and Transportation Map of Lancaster County* showing the project area.

Lancaster County made efforts to diversify into textiles, but was never as successful as its neighbor, Chester County. In fact, by 1907 there was only one mill in the County — the Lancaster Cotton Mills, operated by LeRoy Springs — which had been formed in 1895. While not abundant, the Lancaster operation was among the larger concerns in South Carolina, tied for fifth place for capital stock value and seventh in cotton consumed.

Nevertheless, farming continued to dominate the local economy. Although nearly 50,000 acres were planted in cotton, it was not the county's primary crop, ranking in bottom third of producers. In general, the county appears to be diversified, with farms producing orchard crops, corn, wheat, and oats (Watson 1907:576).

Lancaster County is at the edge of what has traditionally been called the Black Belt — the area of large plantations that formed the nucleus of tenancy. Heavily dominated by African Americans, this region was hardest hit by the effects of tenancy, both before and after the Great Depression (Goldenweiser and Truesdell 1924; Woofter 1936:3). Just west, however, was the Upper Piedmont, where plantations were "few, scattered, and small" (Woofter 1936:3) and tenancy was somewhat ameliorated.

The different history of the two areas is reflected by the average size of plantations in the Upper Piedmont and Black Belt — 211 acres compared to 275 acres. There was also a clear difference in owner incomes. In the Upper Piedmont the average net income for the owner was $1,710, compared to $1,462 for Black Belt owners.

Tenancy was also heavier in the Black Belt, accounting for 73% of the farmers, compared to only 63% in the Upper Piedmont. This, however, did not translate directly into income levels for tenants. In the Upper Piedmont croppers or sharecroppers had a net yearly income of $104, while share tenants' income was $170.[4] In the Black Belt, croppers did better, earning $127 per family, while the sharecroppers did appreciably worse, earning only $106 per year (Woofter 1936).

The 1939 *General Highway and Transportation Map* for Lancaster (Figure 9) reveals the presence of two farms with tenant houses in the project area. One owner's house is still standing at the intersection of the county road and U.S. 601 and it is likely that archaeological site 38LA419 was associated with this farm.

As South Carolina gradually recovered from the depression of the 1930s (spurred on by World War II), Lancaster turned to industry. Much of the agricultural land was allowed to grow up in timber. Seven piedmont counties, including Lancaster, combined account for nearly 43% of the state's factory workers, although they hold only 30% of its population (Kovacik and Winberry 1987:193).

Previous Archaeological Studies

Lancaster has received relatively little archaeological attention. Derting and his colleagues, for example, list only 34 reports associated with the county, with 29 of these (or 85%) representing highway, transmission line, reservoir, or sewer surveys (Derting et al. 1991). Although dated, this indicates that the attention has been focused on relatively narrow, constrained corridors, with only minor attention devoted to the area's rich prehistoric and protohistoric resources.

[4] Cropper or share-croppers furnished their labor and half of the fertilizer necessary. The landlord furnished the land, a house, fuel, tools, working stock, seed and feed, and the other half of the fertilizer. The crop, minus advances, was split evenly between the cropper and owner. In contrast, share tenants or share renters, provided not only their labor and usually at least two-thirds of the fertilizer, but also the work stock, seed and feed, and tools. The owner provided the land, a house, fuel, and the remainder of the fertilizer. In such arrangements the owner received between one-fourth and one-third of the crop, typically tied to the amount of fertilizer provided, while the tenant received the remainder.

Only one archaeological site has been identified in the project area. In 1992 Ms. Natalie Adams, then working for Chicora Foundation, recorded 38LA282, a scatter of lithics and pottery in a plowed field under the powerline easement. This site was identified as part of another project, but was outside the survey boundaries and was therefore not assessed in any published report. The site form, however, indicates that while the site was large (about 300 feet in diameter), it produced only a small quantity of materials. The absence of artifact concentrations also argued against features being plowed out. As a result, the site form recommendation was that the site was probably not eligible (38LA282 site form, S.C. Institute of Archaeology and Anthropology).

IDENTIFIED SITES

Introduction

The survey methodology has been previously discussed and it was implemented without any substantive changes or problems. A total of 50 shovel tests were located on the survey corridor, although of these only 42 were excavated. The remaining 8 tests were situated on either very steep slopes or in wet, boggy areas. As a result of this work one previously identified site, 38LA282, has been relocated and two new sites, 38LA418 and 38LA419, have been recorded (Figure 10).

38LA282

As previously discussed, this site was originally recorded by Adams in 1992. At that time the site was located in a cultivated field at E547720 N3836920 and was estimated to measure about 300 feet in diameter. A range of flakes and bifaces were recovered, as well as two Savannah River Stemmed points (Coe 1964:44) and a single Yadkin sherd (Coe 1964:30-32).

During the current survey this site was again identified, although its core was located at E547670 N3836950, between stations 15+82 and 17+72. This difference, with the current location about 60 meters to the northwest of the 1992 finds, probably reflects errors in interpolating the site location from the field to the USGS topographic map. There are, however, significant differences in the surface visibility. During the original survey the field visibility was near 100%, the area being cultivated. At the time of the current study ground cover was light, allowing for about 60% surface visibility. In contrast to the original survey, this revisit found the site to measure perhaps 100 feet north-south by 50 feet east-west. This further supports the belief that locational errors may be attributed to not only interpolation problems, but also to reduced surface visibility.

The current study, however, did notice that the site seemed to be focused on a small ridge located on a much broader ridge nose facing to the northeast, toward an intermittent drainage. The rise is so minimal that had the powerline easement not been as clear as it was it probably would have gone unnoticed or been discounted as a false impression (Figure 11). As it is, this study suggests that the bulk of the site was found on this micro-topographic feature.

A significantly reduced artifact collection was acquired during the revisit, consisting of 12 quartz flakes, three metavolcanic flakes, and two quartz biface fragments. While perhaps associated with the reduced surface visibility, the drop in collection size may also indicate that much of the site has already been collected — either during the 1992 study or perhaps by local collectors.

The routine corridor shovel tests (15-18) failed to identify any cultural remains and this site was found based on the surface survey. A series of five shovel tests were excavated at the site (Figure 12) and all of these were also negative. The excavations, however, revealed a typical profile of light olive brown (2.5Y6/4) sand representing the A horizon overlying a light yellowish brown (2.5YR6/4) sand subsoil. The depth of the A horizon soils varied from about 0.1 to 0.6 foot across the site, suggesting that there had been considerable erosion in some areas. Except for this erosion, the profile is consistent with the Wagram sands. This site appears to be on the western edge of the proposed new corridor, with the bulk of the site being within the existing Santee Cooper lines.

This site contains very limited data sets. Based on the current study they are limited to lithics, with the largest category representing flakes. Relatively few tools were identified and none were diagnostic. No pottery was identified. There is no evidence of subsurface remains and the scatter of materials on the surface does not suggest that features are represented by concentrations of

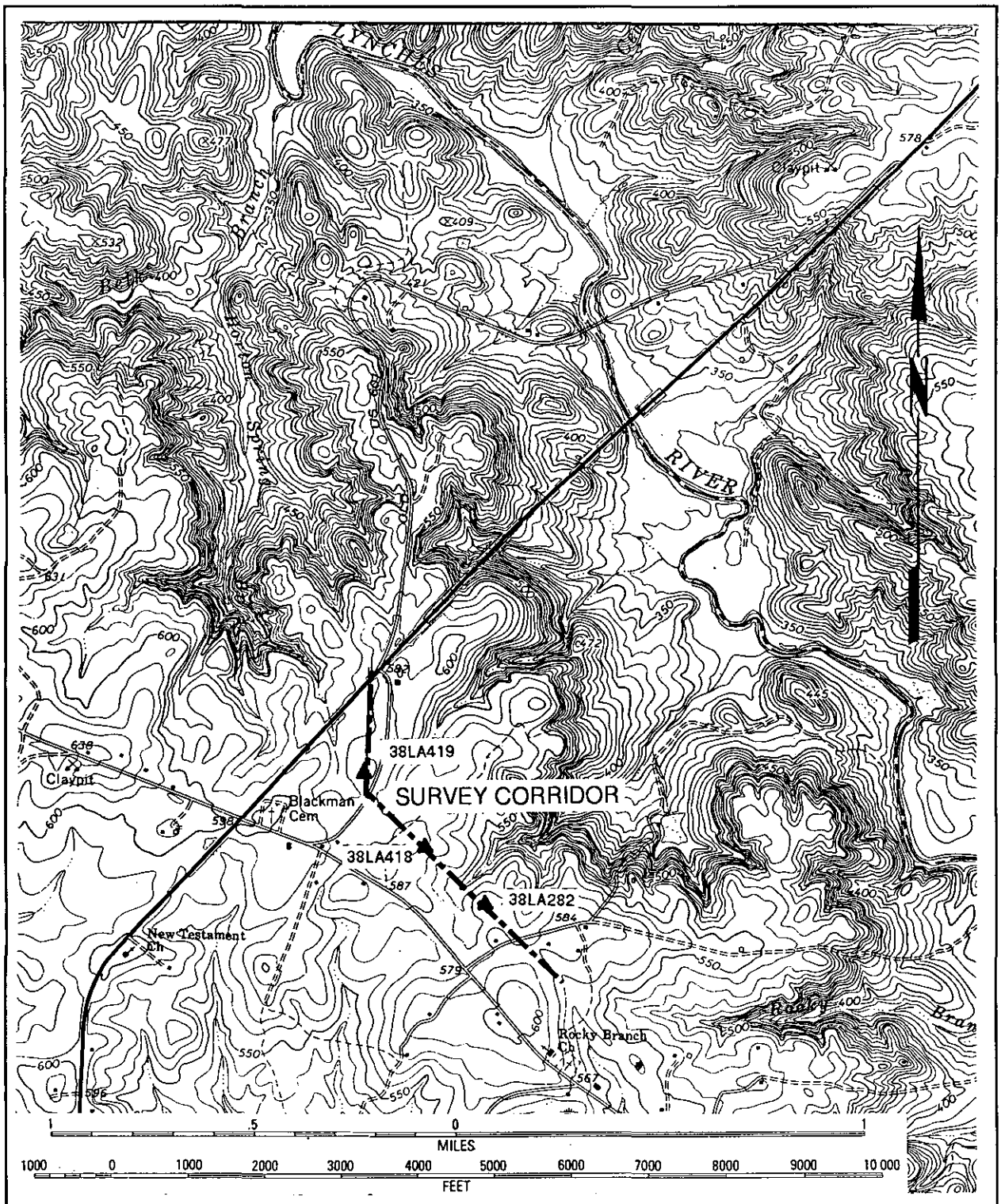

Figure 10. Sites identified in the survey corridor.

Figure 11. View of 38LA282 from the survey corridor looking southwest.

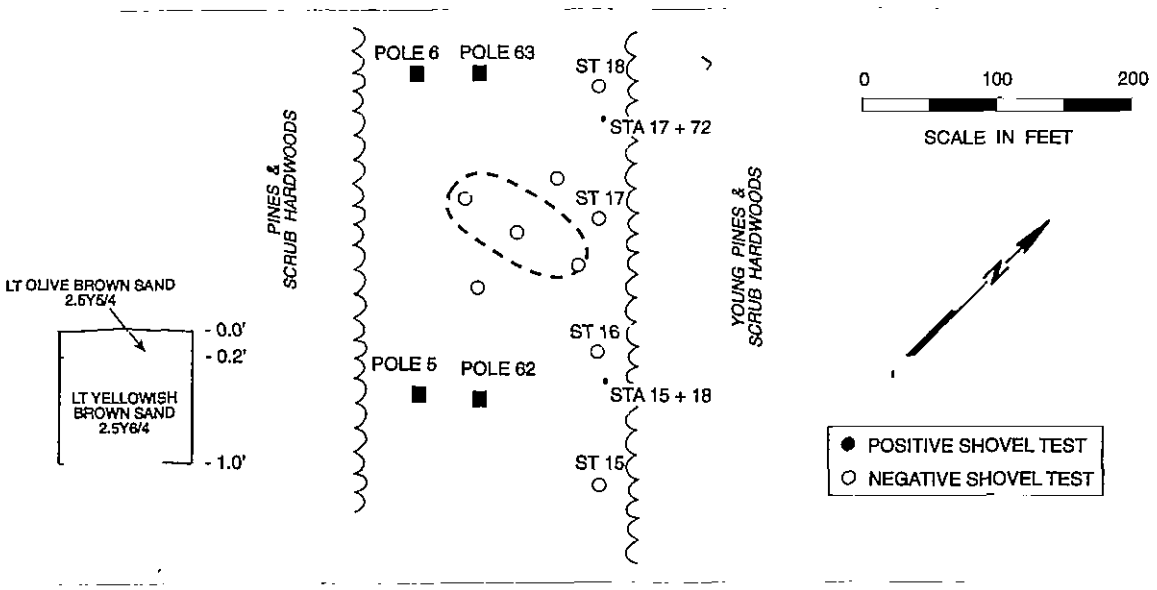

Figure 12. Sketch map and typical profile for 38LA282.

eroding material. No calcined bone was identified.

Even when the data sets from the 1992 survey are considered, adding diagnostic materials from the Late Archaic and Middle Woodland, they have a very limited potential to address significant research questions. It is unlikely that a site without intact features, and very low artifact quantity and variety, can help expand our knowledge on even the broad issues of settlement and subsistence.

As a result, we recommend this site as not eligible for inclusion on the National Register of Historic Places. No further management activities are necessary, pending the concurrence of the State Historic Preservation Office.

38LA418

This site is situated between stations 26+81 and 30+90 and its central UTM coordinates are E547430 N3837200. It was found on a broad ridge nose that has been partially cleared, perhaps for cultivation in the past. Today it appears to be vacant land, although some areas are used as a dirt bike track and others are used for storage (Figure 13). To the west the site area runs into predominately pine woods, while to the east there are both pines and mixed hardwoods. The site elevation is about 580 feet above mean sea level, with a 2 to 5% slope to the south.

Surface visibility in the open areas was excellent. The proposed new corridor had been partially cleared, providing fair surface visibility, while the wooded areas offered surface visibility only in isolated bald spots. A series of five shovel tests along the northeastern side at 100 foot intervals failed to identify any subsurface remains, although two of the three additional tests to the west did yield subsurface materials (Figure 14). While this is a very small sample, it may indicate that the bulk of the site lies under the existing powerline easement.

The shovel tests in the open area reveal about 0.2 foot of dark grayish brown (10YR4/2) and overlying a light yellowish-brown (10YR6/4) sand subsoil. This profile, consistent with deflated Blanton sands, reveals that the site has lost much of its A horizon. During the site visit there was considerably sand blowing since there was no vegetation to hold any of the material in place. It is at least partially because of this that so much material was exposed on the surface. In the woods the A horizon soils are noticeably different, with depths of between 0.5 and 0.8 foot.

The site dimensions of about 450 feet northwest-southeast by 200 feet southwest-northeast are based exclusively on the surface

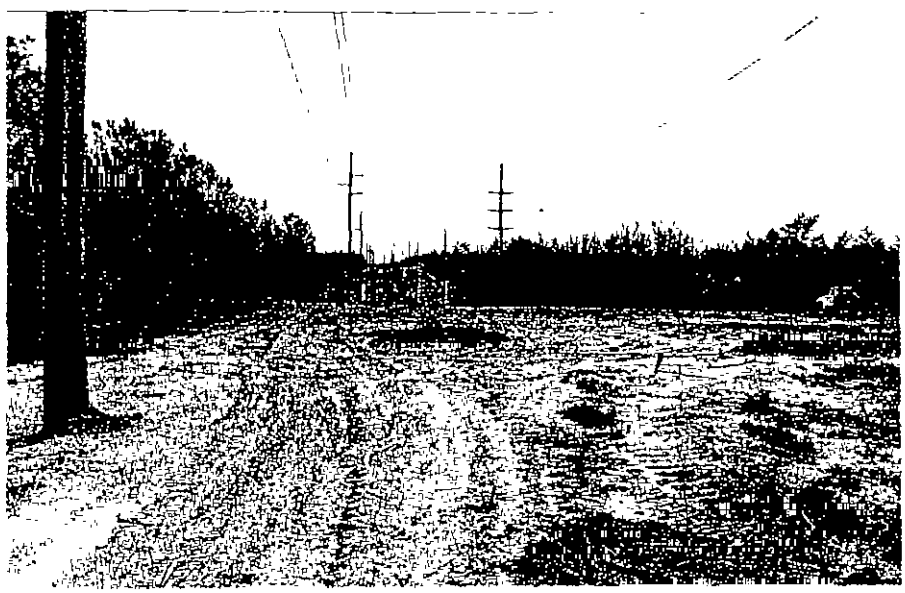

Figure 13. View of site 38LA418 looking to the south, toward the Flat Creek Switching Station.

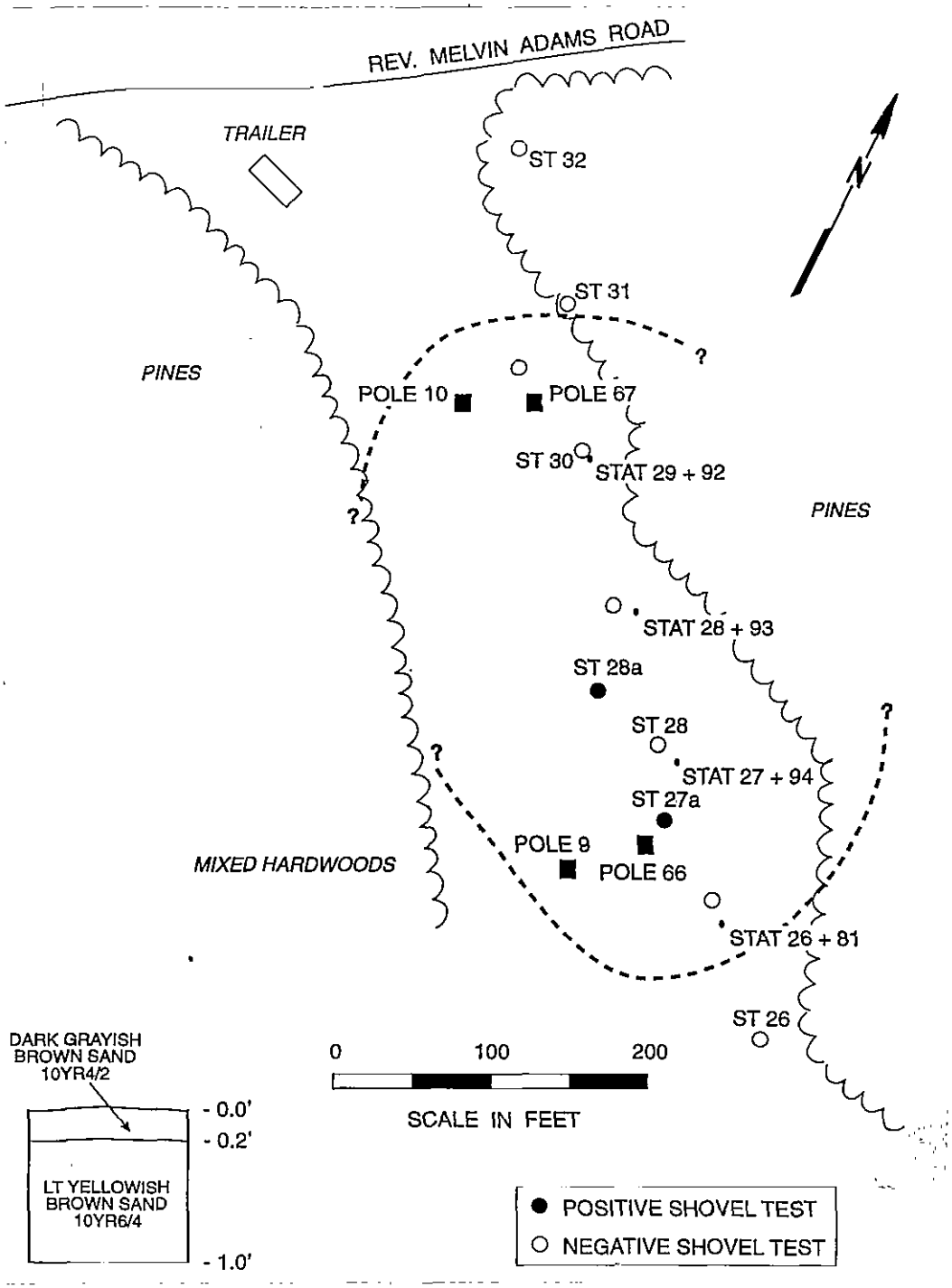

Figure 14. Sketch map and typical profile for 38LA418.

scatter. A grab collection of artifacts produced 128 specimens, including 62 quartz flakes, 32 metavolcanic flakes, two chert flakes, one hammerstone, two quartz bifaces, two metavolcanic bifaces, one quartz Thelma projectile point (South 1959:151-152), and 23 sherds which we have classified as Yadkin, including examples of plain, fabric impressed, and simple stamped. The two positive shovel tests produced one quart flake and one Yadkin plain sherd.

This site also produced a small quantity of calcined bone fragments. These are often found at Sand Hill or Upper Coastal Plain sites and appear to represent small fragments of bone preserved by burning in cooking fires. They can provide relatively little subsistence data, although they do document the use of mammalian species.

This site has produced a fairly wide range of data sets. The recovered artifacts include flakes, tools, and pottery. Ecofacts include calcined bone. The surface collection suggests that there may be some intra-site patterning, with apparent separation of the pottery at the southern end and a hint that the two types of lithic material may be clustered. While much of the site has been extensively eroded, the wooded areas (albeit fringes) appear more intact.

It seems likely that 38LA418 may be able to address at least a narrow range of research questions. For example, a controlled surface collection may be able to address the question of intra-site patterning and, with sufficiently small collection units, may even be able to identify specific work areas. If additional testing were to document that fringe areas are not only intact, but also offer either stratigraphic data or the possibility of subsurface features, then the range of questions the site could address would be broadened. While only calcined bone is found, and its information potential is limited, plotting its occurrence, through either surface collection or areal excavations may be able to identify specific hearth areas.

As a result, we recommend this site as potentially eligible for inclusion on the National Register of Historic Places. If the site can be avoided by construction activities, essentially protecting the data through green spacing, then no additional investigations are necessary.

If preservation in place is not feasible, we recommend a three stage testing operation consisting of controlled surface collections, close interval shovel testing to establish site boundaries, and limited formal excavations. This would help clarify eligibly and allow a final determination.

38LA419

This is a multicomponent site consisting of a small quantity of prehistoric lithics and late nineteenth - early twentieth century historic domestic remains. The site was identified between stations 39+22 and 41+00, and its central UTM coordinates are E547200 N3837480. The site is found at the southwest edge of a broad interior ridge with an elevation of about 580 feet above mean sea level.

The routine 100-foot shovel tests failed to identify any subsurface material, but the corridor in this area consists of a fallow agricultural field with nearly 75% surface visibility. It was during the pedestrian survey between shovel tests that surface materials were initially noticed. These materials cover an area measuring about 200 feet northeast-southwest by 100 feet southeast-northwest.

Prehistoric materials recovered from the site include five quartz flakes, eight metavolcanic flakes, one eroded small sherd, two hammerstones, and one used metavolcanic flake. Unfortunately this assemblage lacks diagnostic materials except for the single small sherd, which places the site at least in the Woodland Period. Historic remains are more widely scattered and consist of one polychrome hand painted whiteware, one decalcomania whiteware, eight undecorated whiteware, one industrial stoneware, one aqua glass fragment, one fragment of blue container glass, and one fragment of window glass. These materials suggest a very late nineteenth century to mid-twentieth century occupation.

At the far northwestern edge of the site are two piles of structural debris. The more northern represents wood timbers and tin roofing,

Figure 15. Site 38LA419, view to the north from station 39.

apparently bulldozed in a pile. Slightly to the southwest is a second, smaller pile of primarily concrete and brick, apparently representing foundation, chimney, and perhaps step remains, also bulldozed into a discrete pile. No evidence of the original structure location was identified based on this study, but it seems likely that it was on the edge of the field, situated just west and outside of the proposed corridor.

The site was tested by excavating four additional shovel tests within the site confines at 50 foot intervals from Shovel Test 40, which appeared to be about in the middle of the site scatter. All of these additional tests were negative. They did, however, reveal an Ap horizon about 0.7 foot in depth of dark grayish-brown (10YR4/2) sand overlying a subsoil of light yellowish-brown (10YR6/4) sand. This profile is generally consistent with the Blanton sands reported for this area. No features were encountered in any of the shovel tests.

The prehistoric remains at the site are somewhat atypical since there is no immediate source of water. About 500 feet to the south there is an intermittent drainage which must have served as the magnet for this encampment on the low ridge. The historic remains, as previously mentioned, appear to be that of a tenant house, shown on the 1939 highway map (Figure 9). The original farmhouse appears to be situated to the northeast on U.S. 601 at the junction with the county road.

The data sets from this site are limited. Those associated with the prehistoric component include only flakes and one sherd. We found no concentrations of remains that might indicate intact features. Nor did we recover any ecofactual material, such as calcined bone. The scatter was very diffuse, making it unlikely that any intra-site patterns exist.

The remains from the tenant occupation include only ceramics, glass, and limited architectural remains. The bulk of the architectural data has been aggressively removed from the landscape. Based on the investigation of similarly treated sites, it is likely that this process of bulldozing and relocation has also probably affected near yard refuse areas.

In addition to the limited data sets, we must also consider the site's limited integrity, especially as it relates to the historic assemblage. It appears that intentional demolition and sorting of the debris has dramatically affected site integrity. As a result, it is unlikely that this site is capable of addressing significant research questions.

We recommend the site not eligible for

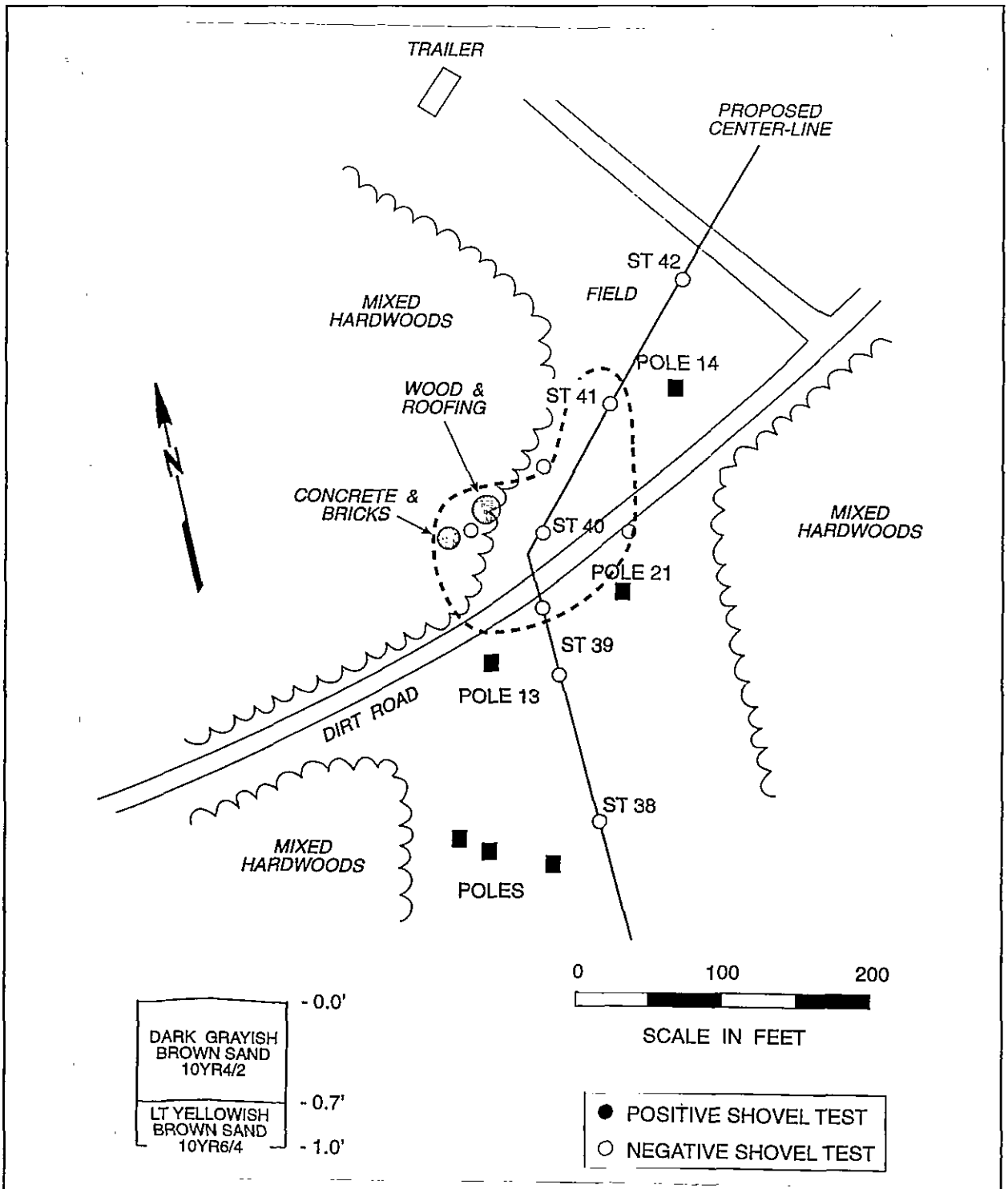

Figure 16. Sketch map and typical profile for 38LA419.

inclusion on the National Register of Historic Places. With the approval of the State Historic Preservation Office no additional management activities at this site are recommended.

CONCLUSIONS

Introduction

As a result of the intensive survey of the approximately 1 mile long Santee Cooper transmission corridor from the Flat Creek Switching Station northward to U.S. 601 in Lancaster County, one previously recorded archaeological site and two new archaeological sites were identified and assessed. Of these, two are recommended as not eligible for inclusion on the National Register of Historic Places, while one is recommended as potentially eligible for inclusion, under Criterion D, that it may have yielded, or may be likely to yield, information important in prehistory or history. The potentially eligible site has been evaluated as potentially capable of addressing significant research questions regarding settlement and intra-site activity loci for both Archaic and Woodland Sand Hills sites.

The site, situated on a broad ridge facing an intermittent drainage to the south, has been impacted by cultivation, logging, the construction of the existing transmission lines, and soil erosion. Nevertheless, the quantity and variety of artifacts is impressive and we believe warrants additional attention.

If the site can be avoided by construction activities then no additional work is necessary to complete the evaluation process. The site can be "green spaced" and protected by simple avoidance.

If this is not possible, then it will be necessary to collect additional information in order to determine whether the site is eligible for inclusion on the National Register.

In this case we recommend that an intensive controlled surface collection be made, probably using relatively small collection units, perhaps 20 feet square. These collections will provide information on potential clustering of different types of artifactual material, such as ceramics and different raw materials. It should also help determine if specific blow-outs are present, possibly representing dispersed or deflated features.

Coupled with this we recommend close interval shovel testing, perhaps using the already established 20-foot collection grid to help establish the site boundaries and more intensively explore the areas outside the cleared core of the site.

Finally, we also recommend some formal excavations to assist in determining if features may be present as well as better determining if stratigraphy may be present.

It may be that this level of effort will be adequate to address the research potential of the tested sites. If so, then the sites will be evaluated as not eligible for inclusion on the National Register. Alternatively, it may be that the sites will be found eligible for the National Register, indicating that they do contain additional significant information. Under these circumstances, it is still possible to green space the sites, simply avoiding them. Or, it will likely be possible to conduct data recovery excavations at the sites, which will allow the significant information to be collected. Afterwards, no additional management activities at the sites will be necessary and the land may be used as necessary.

Table 1.
Archaeological Sites Identified in the Project Corridor

Site Number	Components	Site Size (ft.)	Eligibility
38LA282	Prehistoric	100x50	NE
38LA418	Prehistoric	450x200	PE
38LA419	Prehistoric & Historic	200x100	NE

NE = not eligible for inclusion on the National Register
PE = potentially eligible for inclusion on the National Register

Site Locations

This survey is of considerable interest since the survey tract is situated in a portion of Lancaster County for which there is very little information. Here, like other areas examined in nearby Florence and Chesterfield counties, prehistoric sites seem to be situated on broad ridges overlooking drainages (see for example Trinkley 1997, Trinkley and Adams 1992, Taylor 1984).

Although representing a very short corridor and recovering only three sites, this study does confirm the presence of at least some potentially large Sand Hill sites, such as 38LA418, in this area of the state. It also associates these sites with what seem to be particularly small drainages. This, however, may be a fluke of the sample sizes.

The absence of eighteenth or early nineteenth century sites is certainly associated with the nature of the survey — a rather short and very narrow ribbon. But the study corridor is in an area which likely saw relatively little occupation. It was not the floodplain, where large arable fields are found, nor is it associated with a major early roadway. As a result, the project area is somewhat remote from the settlement areas prior to the early twentieth century with massive road construction began to open up additional areas.

It is not likely that archaeological sites were missed in this work since the ground cover was conducive to site recovery. In fact, all three sites were first encountered based on surface finds and only one produced any subsurface materials. This work again focuses attention on the types of archaeological sites which can, and cannot be identified using traditional shovel testing at conventional intervals.

Of course, historic research did lead us to expect the recovery of a tenant site in the northern third of the survey corridor and this site was identified. This points out the benefit of at some site specific historic research prior to even modest surveys.

Recommendations

Those sites evaluated as not eligible, pending State Historic Preservation Office concurrence, require no additional management activities. This means that Santee Cooper need not make any special provisions for their protection or preservation.

For the one site recommended as potentially eligible Santee Cooper has two options. Either additional archaeological investigations can be undertaken to collect the data necessary for a thorough evaluation, or the site can, essentially, be treated as an eligible property and avoided during construction, as well as subsequent maintenance operations. It is important to emphasize that green spacing requires perpetual preservation and protection.

This green spacing approach is likely the most cost effective, assuming that avoidance is possible. It is also likely to be the most timely approach, allowing Santee Cooper to commence construction as soon as the State Historic Preservation Office has concurred with our recommendations.

Finally, it is possible that in spite of this intensive survey, additional archaeological remains may be encountered during construction. If concentrations of pottery, ceramics, arrowheads, bottles, or other remains are identified, all work in the site area should cease until the site can be assessed by either Chicora Foundation or the State Historic Preservation Office. The contractor should be notified to be alert to the possibility of additional archaeological remains.

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